

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-36 Cancelled

36. (Previously Presented) A polynucleotide encoding a chimeric enzyme comprising:
 - a) a glycosyltransferase localization signal directing localization of the chimeric enzyme to the Golgi of a cell; and
 - b) a catalytic domain of a fucosyl transferase that competes with galactosyltransferase for substrate.
37. (Previously Presented) A polynucleotide encoding a chimeric enzyme comprising:
 - a) a localization signal of an alpha-1,3 galactosyl transferase enzyme;
 - b) a catalytic domain of a fucosyl transferase that competes with the galactosyltransferase for substrate.
38. (Previously Presented) The polynucleotide of claim 36, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.
39. (Previously Presented) The polynucleotide of claim 37, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.
40. (Previously Presented) The polynucleotide of claim 36, wherein the glycosyltransferase localization signal comprises a cytoplasmic domain of a glycosyltransferase.
41. (Previously Presented) The polynucleotide of claim 37, wherein the localization signal comprises a cytoplasmic domain of a glycosyltransferase.
42. (Previously Presented) The polynucleotide of claim 36, wherein the localization signal is (SEQ. ID. No. 11), MNVKKGK (SEQ. ID. No. 12), or MVVKKGK (SEQ. ID. No. 13).

43. (Previously Presented) The polynucleotide of claim 37, wherein the localization signal is MNVKGR (SEQ. ID. No. 11), MNVKGK (SEQ. ID. No. 12), or MVVKGK (SEQ. ID. No. 13).

44. (Previously Presented) A vector comprising the polynucleotide of claim 36.

45. (Previously Presented) A vector comprising the polynucleotide of claim 37.

46. (Previously Presented) The vector of claim 44, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

47. (Previously Presented) The vector of claim 45, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

48. (Currently Amended) A method for reducing an amount of gal-alpha- (1,3)- gal present on cells comprising:

- a) transducing the cells with a polynucleotide encoding chimeric enzyme, said chimeric enzyme comprising:
 - i) a glycosyltransferase localization signal directing localization of the chimeric enzyme to the Golgi; and
 - ii) a catalytic domain of a fucosyl transferase that competes with galactosyltransferase for substrate;
- b) expressing the chimeric enzyme in the cells, wherein the expression of the chimeric enzyme in the cells is effective to reduce polynucleotide in the cells such that the chimeric enzyme is produced, wherein activity of the chimeric enzyme in the cells reduces the amount of gal-alpha- (1,3)- gal present on the cells by competing with galactosyl transferase for substrate, resulting in less substrate being converted into a gal-alpha- (1,3)-gal than in the absence of said chimeric enzyme.

49. (Currently Amended) A method for reducing an amount of gal-alpha- (1,3)- gal present on cells comprising:

a) transducing the cells with a polynuoleotide enoding a chimeric enzyme, said chimeric enzyme comprising:

- i) a localization signal of an alpha- 1,3 galactosyl transferase enzyme; and
- ii) a catalytic domain of a fucosyl transferase that competes with galactosyl transferase for substrate;

b) expressing the chimeric enzyme in the cells, wherein the expression of the chimeric enzyme in the cells is effective to reduce polynucleotide in the cells such that the chimeric enzyme is produced, wherein activity of the chimeric enzyme in the cells reduces the amount of gal-alpha- (1,3)- gal present on the cells by competing with galactosyl transferase for substrate, resulting in less substrate being converted into gal-alpha-(1,3)-gal than in the absence of said chimeric enzyme.

50. (Previously Presented) The method of claim 48, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

51. (Previously Presented) The method of claim 49, wherein the fucosyl transferase is H-transferase or secretor-type alpha-1,2 fucosyl transferase.

52. (Previously Presented) A method of claim 48, wherein said transforming is *ex vivo*.

53. (Previously Presented) A method of claim 49, wherein said transforming is *ex vivo*.

54. (Currently Amended) A method for reducing hyperacute rejection of transplanted porcine cells comprising transforming the cells with the polynucleotide of claim 36 prior to transplantation, wherein expression of the chimeric enzyme is effective to reduce polynucleotide results in less gal-alpha- (1,3)- gal present on the cells.

55. (Currently Amended) A method for reducing hyperacute rejection of transplanted porcine cells comprising transforming the cells with the polynucleotide of claim 37 prior to transplantation, wherein expression of the chimeric enzyme is effective to reduce polynucleotide results in less gal-alpha- (1,3)- gal present on the cells.